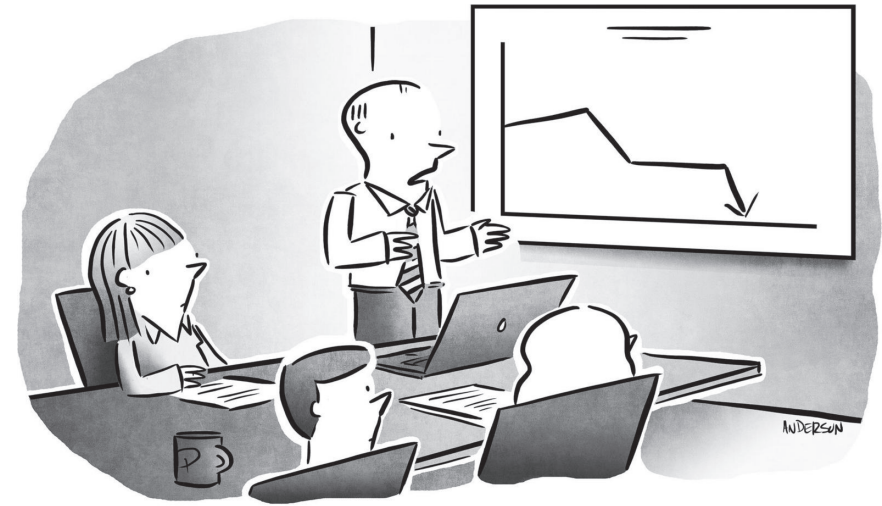# Max MRR: Your growth ceiling

Buffer · Max MRR · Max MRR at Buffer · NRR ≥ 100% · Quick Ratio

"If by profits you mean an excess of revenues over outlays and expenses in a business enterprise over a given period of time, then yes, it doesn't look good."

For years I've battled the same misconceptions:

- "7% cancellation is fine, especially for consumer businesses."
- "As long as I keep adding $300/mo of MRR every month, I'll build a real business."
- "I'll keep scaling past a few million in ARR by doing what I've always done."

I've shown charts and real-world data[2] to disprove these notions, but it's still hard for people to apply it to their own companies.

Lately I've been using a new growth-related metric that I've called "Max MRR." It's easy to apply it to yourself, and because it's a visceral, tangible number—not some abstract financial ratio—it cuts through the vail of willful ignorance, and can be implemented in dashboards.

Here's how it works, along with a real-world example.

THE BUFFER EXAMPLE

Buffer[3] is a popular social media queuing tool. Because their data is public,[4] and they've gone through a few different phases of life, they make for a terrific case-study in SaaS metrics. As we'll see, this new metric of "Max MRR" accurately characterizes their business better than other commonly-used metrics.

Buffer started growing slowly, then quickly for years. Then revenue topped out (before COVID) and then shrunk (during COVID), reaching a new (lower) plataeu in 2023. Then, after starting a new growth plan, revenue started going up again (Figure 1).

What was going on with the customer base, particularly during these years when revenue peaked, shrank, and stayed constant? Was the customer base itself static? Not at all (Figure 2).
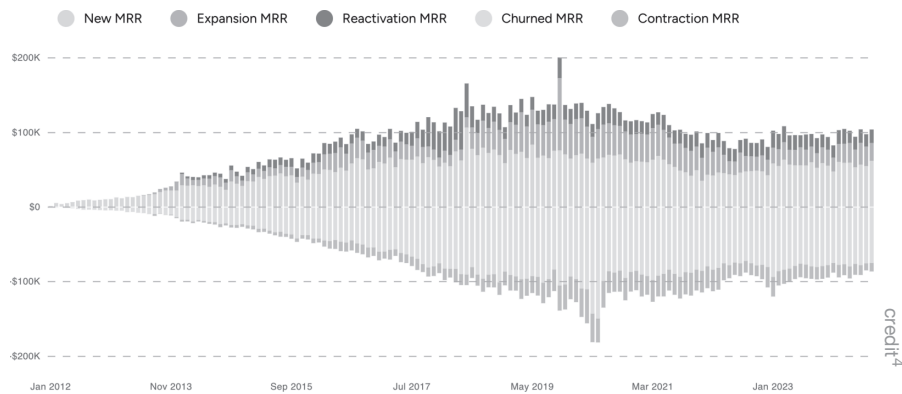
Figure 1: Buffer's MRR over time

Figure 2: During Buffer's period of stagnation and shrinkage, it also was experiencing more new customers and upgrades than ever… but also even more cancellations and downgrades than ever.

The "Max MRR" metric is able to predict these changes in revenue, months ahead of time. We'll first use a toy example to see how it works, and then apply it to Buffer.

THE MAX MRR METRIC

Let's explore a simple, hypothetical SaaS company, with stable growth metrics, as follows:

- Starting at $0 MRR
- +$1,000 new MRR each month from marketing and sales
- 5% cancellation each month from existing customers

Tracking MRR over time, it starts out growing nicely, reaching $10k MRR in 15 months, but then growth levels out, and it never reaches $20k MRR, even after 60 months (Figure 3).

The reason this happens is that new MRR is chugging along at a constant pace (+$1000/mo), whereas cancellation is non-linear; it is proportional to how large the company is. The larger the company, the more

MRR: flat marketing, flat cancellation rate
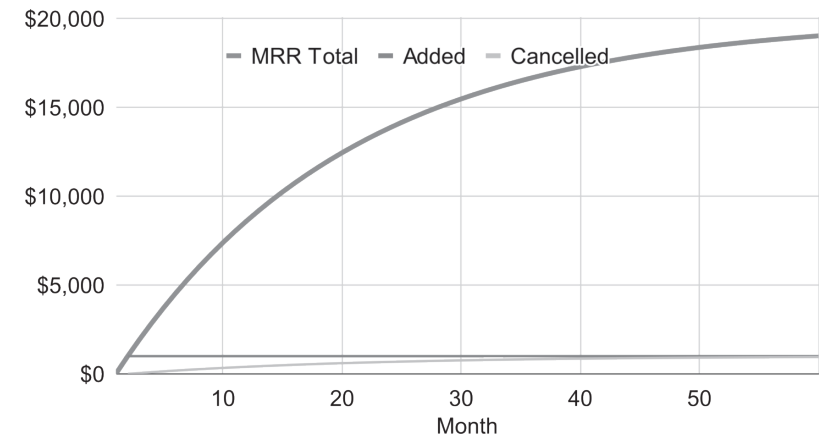New: $1k/mo; Cancel: 5%/mo

Figure 3

absolute dollars of churn there is, even though the *rate* of churn is steady (5%). As churn dollars grow in absolute quantity, growth slows.

Eventually cancellation-dollars are just as large as new-dollars, and the company stops growing, reaching a steady-state.

What is this maximum size? Mathematically it's trivial to compute; we just convert the previous sentence into numbers, where c is the monthly cancellation rate, i.e. when "cancellation dollars" equals "new dollars":

$$\text{MRR}_{\text{total}} \times c = \text{MRR}_{\text{new}}$$
$$\text{MRR}_{\text{total}} = \frac{\text{MRR}_{\text{new}}}{c}$$

In our toy example, $\text{MRR}_{\text{new}} = \$1000$ and $c = 0.05$, so the maximum total revenue is $\frac{\$1000}{0.05} = \$20,000$, which is exactly what the revenue is approaching in our chart (Figure 4).

This model also explains the common phenomenon seen in new start-ups: Fast initial growth, that tapers off sooner than the founders expect, given t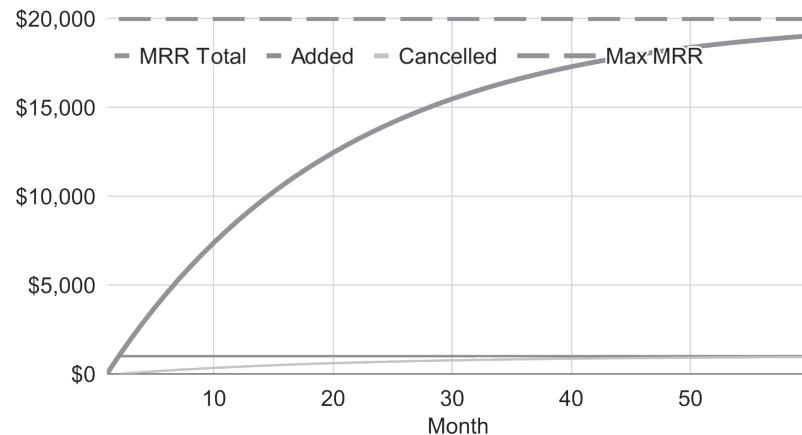hat the target market is still many orders of magnitude larger than the company. Since "market size" is not the ceiling, what is causing the slow-down?

The chart shows the answer. When "current MRR" is far away from "Max MRR," MRR will grow quickly, as there's not a lot of existing customers at all, and thus not much churn. As we accumulate customers, we also accumulate churn; it's the *churn* that's slowing growth, not the *market*. As MRR approaches Max MRR, this is the dominant effect explaining growth.

Thus the Max MRR metric indicates when the company will stop growing. Obviously we want this number to increase over time, as we increase new revenue or decrease cancellations. How can we tell where to invest our time?

Max MRR as cancellation rate improves

In real companies, neither new MRR nor cancellation rate is constant, so Max MRR changes over time. How does that feel?

Varying cancellation even by small amount yields a large difference, because cancellation is a nonlinear—exponential in fact—so small changes are magnified.

Let's take the same company, still with a fixed $1000/mo in New MRR, starting with 7%/mo cancellation for the first 20 months, then improving to 4% over the next 10 months, then holding at 4% (Figure 5).

Notice how revenue growth seems "wavy," and didn't react quickly to a major improvement in cancellation. In contrast, let's also plot the "Max MRR" metric along the way (Figure 6).

Notice how the "max revenue" line shoots up as soon as cancellation rate starts improving, with total MRR lagging behind. That's because cancellation rate is effectively a "ceiling" on growth. When MRR is near that ceiling, the cancellation rate dominates the (slowing) growth; when we lift the ceiling, "New MRR" becomes the dominant factor again.

From this we learn that "New MRR" governs how fast the company can grow even under perfect conditions, whereas "cancellation rate" governs the maximum size of the company.

MRR: flat marketing, flat cancellation rate

New: $1k/mo; Cancel: 5%/mo

Figure 4

MRR: flat marketing, improving cancellation

New: $1k/mo; Cancel: 7% in 0-20m; 7% → 4% in 20-30m; 4% thereafter

Figure 5

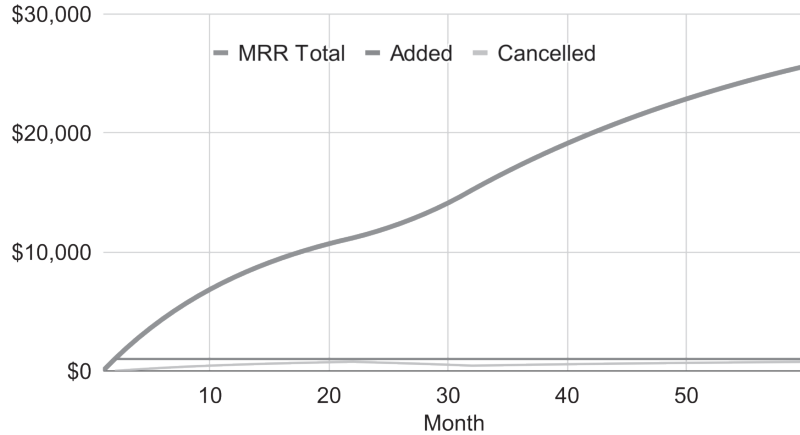## MRR: flat marketing, improving cancellation

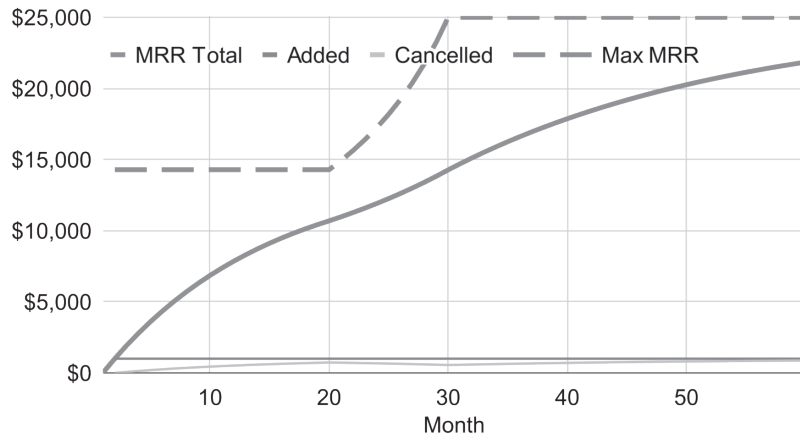New: $1k/mo; Cancel: 7% in 0-20m; 7% → 4% in 20-30m; 4% thereafter

Figure 6

We also learn that "Max MRR" is a good *leading* indicator of long-term growth, because it shoots up quickly when conditions change, whereas this change was invisible in "Current MRR," and took years to unfold.

Max MRR as new MRR accelerates

Now let's fix cancellation rate back at 5%, and vary "New MRR."

We already know that if we have a steady input from marketing, growth levels out quickly. What if marketing improves?

Let's suppose in the first month we add $100 in MRR, in the second month we add $200, and so on, adding $100 more each month than the month before. This is *accelerating* revenue—growing faster and faster. And for 60 straight months (Figure 7).

The first thing we notice is that growth doesn't stop. "Max MRR" grows alongside actual MRR.

Notice, though, this company has *accelerating* new MRR, and yet total MRR is *not accelerating*. Total MRR is *growing* but not *accelerating*.

MRR: accelerated marketing, flat cancellation rate
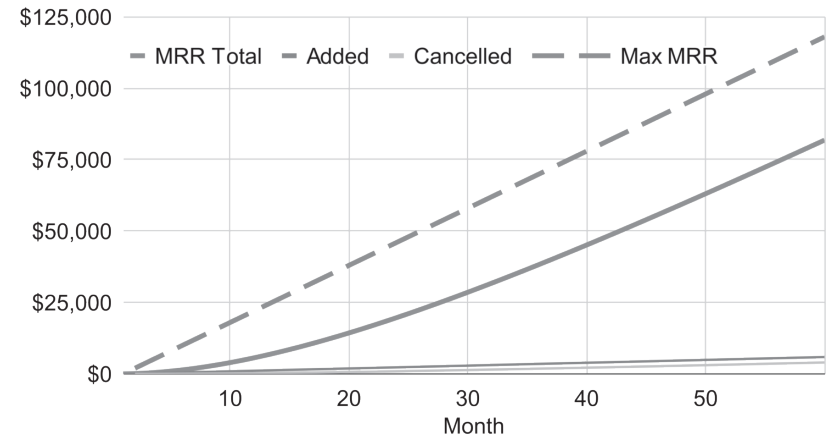
New: $100/mo/mo; Cancel: 5%/mo

Figure 7

How frustrating, that **new MRR is accelerating and yet MRR is growing linearly!** This is because cancellations are exponential, which means cancellations are accelerating too. The acceleration from cancellation cancels out the acceleration from New MRR. Thus, even companies with accelerating new growth, typically still actually grow linearly, as discussed and analyzed here with many examples.[5]

Furthermore, this scenario is too optimistic; you cannot grow a marketing channel forever. In fact, channels not only top out, but tend to decline once mature (for reasons detailed here[5]). In a more typical situation, the company figures out a marketing channel, but then hits its inventory limit. This results in initially-accelerating growth, followed by the ceiling that we've now come to expect. And once again, the Max MRR curve presages this, and therefore is a useful leading indicator (Figure 8).

We also see the emergence of the classic "S-curve" revenue line. Growth accelerates during the combination of "not many customers yet who could cancel" and "new marketing channel is still growing." When marketing effectiveness levels off, the curve switches into deceleration.
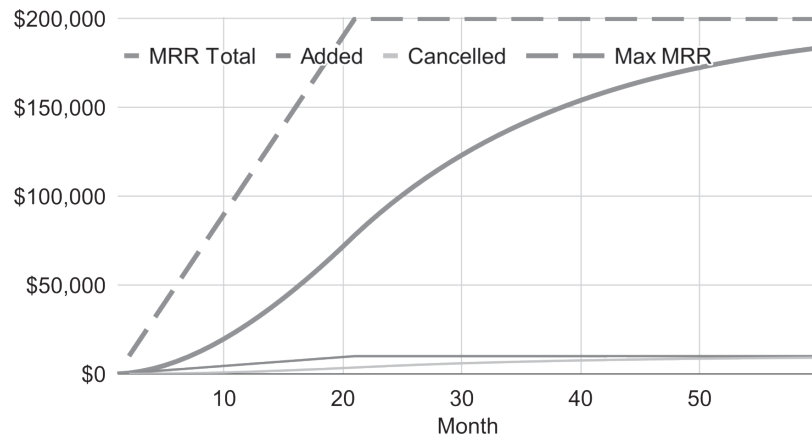
This has been observed hundreds if not thousands of times across companies in all industries and decades.

The Max MRR curve predicts all this, months or even years before it does happen. This is its utility.

Now that we have a good sense of how everything works with toy models, we're ready to apply this to the Buffer example.

MAX MRR AT BUFFER

Back to Buffer.

Here's their MRR with the Max MRR line (Figure 9).

Buffer went through a few phases:

MRR: accelerated marketing, flat cancellation rate

New: $500/mo/mo until $10k/mo; Cancel: 5%/mo

Figure 8

Buffer: MRR and Max MRR

New MRR stopped accelerating in 2018; Cancellation 8% → 6% by 2014
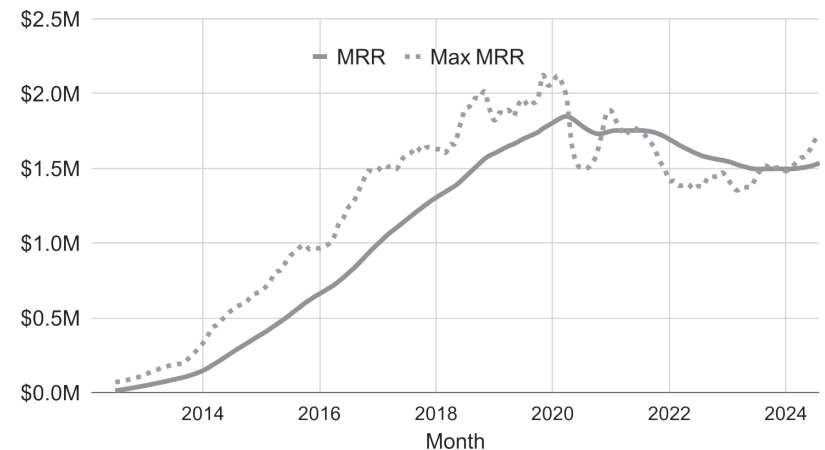
Figure 9

Timeframe	New MRR/Month* & Cancel Rate**	Discussion
2012-2014	MRR $3k → $40k Cancel 8% → 6%	As they found Product/Market Fit, they got cancellations under control, and accelerated new MRR, resulting in Max MRR increasing and revenue starting to accelerate.
2014-2020	MRR $40k → $140k Cancel 6%	Although cancellations never improved, they consistently accelerated new MRR, keeping the linear growth while they were able to maintain it. But never accelerating growth, because cancellations were still high.
2020-2024	MRR $140k → $90k Cancel 7%	Revenue sharply declines, and struggles for years; cancellation pops up another percentage. New MRR is still large, but because cancellation is also large, Max MRR dips below revenue, so revenue falls.
2024-	MRR $100k Cancel 6%	New MRR barely increased, but cancellation improved, so Max MRR has gone back above MRR, and we see a little growth.

Notice how the Max MRR line reacts much quicker, and with much larger magnitude, than any other metric. Both with good news and bad news.

Looking at the components of Max MRR, the most impactful culprit is the high cancellation rate. 6% is precarious, requiring accelerating new MRR to keep up, and quickly tanking revenue as soon as new MRR doesn't keep up, which it inevitably cannot.

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* Includes new customer MRR, upgrade MRR, and reactivating previously-cancelled customers.
** Includes customer cancellations and downgrades.

Buffer: MRR if cancellation eventually went to 3%
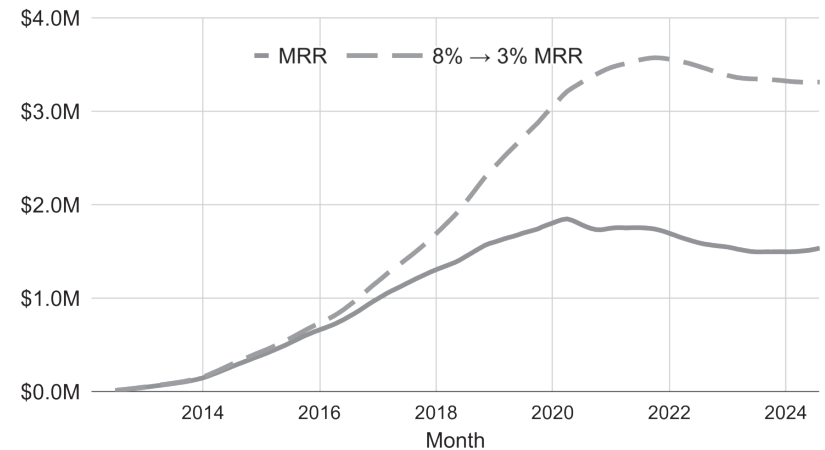New MRR actuals, including 2020 drop; Cancellation 8% → 3% by 2019

Figure 10

What if Buffer had focussed on customer retention, shifting the cancellation rate over five years from 8% in 2014 to 3% by 2019? Then revenue would have doubled (Figure 10).

Of course this is easy to predict knowing how Max MRR works. If you halve the cancellation rate, you double Max MRR.

MAX MRR VS NRR

NRR is Net Revenue Rentention, which answers the question: If no new customers were added, how would revenue change this month, as a percentage of current MRR? Specifically:

$$NRR = \frac{Upgrade - Downgrade - Cancel}{MRR}$$

When cancellations and downgrades are larger than upgrades, revenue grows every month, even when you're not adding new customers into the business. Anything you add, grows it even more. At what point would revenue top out in that scenario?

If markets were infinite, you would never stop growing! Therefore "Max MRR" ceases to have meaning.

Of course, markets are not infinite, just as marketing channels are not infinite, so you will top out anyway, but not because of the factors that go into Max MRR. Rather, it will be because of market share of your target segment.

This demonstrates a simple point: Aside from having high retention, the most powerful thing you can do to create growth is to have NRR ≥ 100%. Indeed, almost all public SaaS companies have NRR ≥ 100%, exactly because if they didn't, their Max NRR ceiling would be too low for their lofty revenue goals (Figure 11).

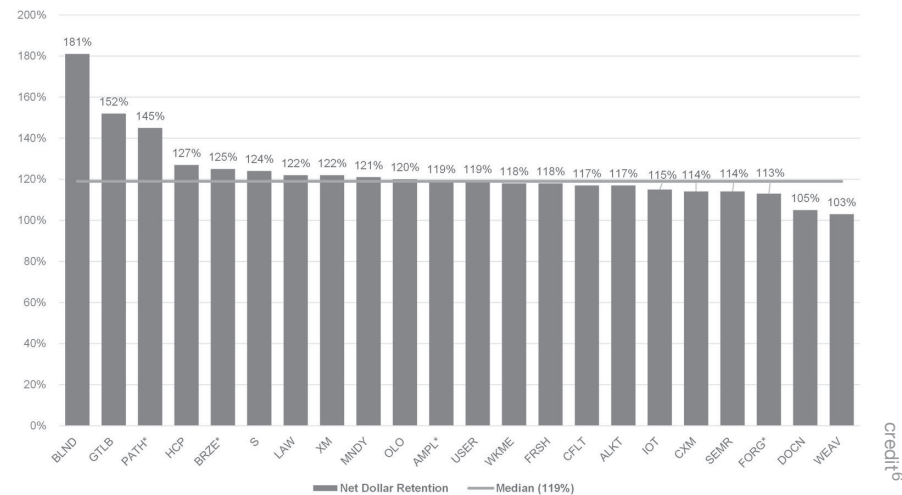This rule isn't important only for heavily-funded VC-backed companies gunning for hundreds of millions of ARR. It's just as valid for the solo-preneur company. Indeed, NRR creates growth even if you have limited budget for marketing, which is typically the case. It also means your customers are growing with you, becoming more successful, receiving more value, and happy to share some of that with you in the form of price. This is a wonderful signal and a wonderful business model regardless of your long-term financial goals.

MAX MRR VS QUICK RATIO

The SaaS Quick Ratio* is sometimes used in a similar way, measuring how much cancellations and downgrades are dragging down growth from new customers and upgrades:

$$\text{Quick Ratio} = \frac{\text{New} + \text{Upgrade}}{\text{Cancel} + \text{Downgrade}}$$

A high-growth, early-scale company should have a Quick Ratio of 3-4; a company at scale with healthy growth should be 1.5-2, and the company isn't growing at 1, and is contracting if below 1. This sounds somewhat like Max MRR.

However, useful as it is, it does not predict how revenue will actually grow, as is evident from Buffer's Quick Ratio (Figure 12).

This doesn't invalidate Quick Ratio as a metric, it just isn't a predictor of how revenue will change. Max MRR is better for that.

Also, Max MRR is easier to understand and get excited about. It feels tangible to have a "revenue ceiling" that you are trying to increase. It's

Figure 11: Average NRR at IPO for SaaS companies is 119%; all were above 100%. Average ARR at IPO is $255M.

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* Not to be confused with the financial Quick Ratio,[7] which is the ratio of ready-assets to liabilities, used to measure how easily a company will be able to cover its financial obligations.

Buffer: MRR & Quick Ratio
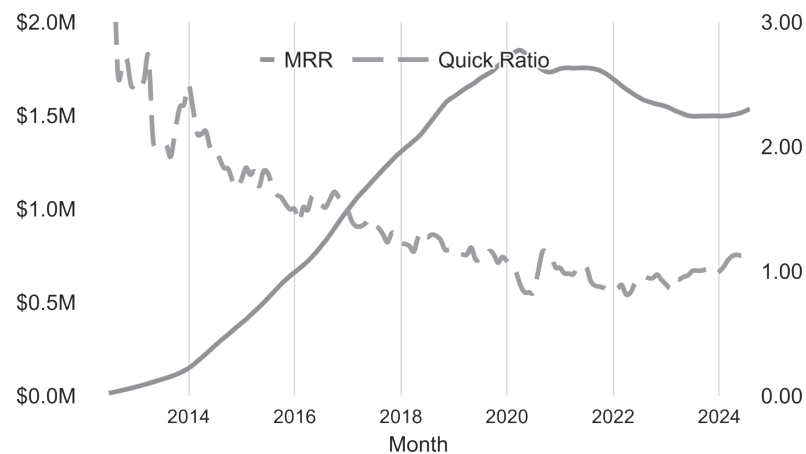
Quick Ratio = (New + Upgrade) / (Cancel + Downgrade)

Figure 12: Buffer's Quick Ratio drops precipitously throughout its period of sustained, even growth, approaching the "bad levels" near 1 years before revenue actually tops out and turns for the worse.

hard to get excited about a goal like: "Let's get our Quick Ratio from 1.4 to 1.6."

No metric tells the entire story on its own; max MRR is no exception.

But, it's a fun, simple, explanatory, predictive, and very real number that is applicable for companies of all stages and sizes.

The current version of this article:

`https://asmartbear.com/max-mrr/`

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7. https://en.wikipedia.org/wiki/Quick_ratio